

LOUISIANA DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT
LABORATORY MOISTURE - DENSITY RELATIONSHIP
DOTD TR 418 - Methods A & B
(Metric)

DOTD 03-22-4194
Metric
Rev. 4/98

PROJECT NO: _____ DATE: _____ LAB NO: _____
*TYPE ADDITIVE: _____ TYPE SOIL: _____ SAMPLE NO: _____
TESTED BY: _____ CHECKED BY: _____

*MAX. DRY DENSITY OF SOIL (____ TR 418-A, ____ TR 415-A), kg/m ³	A		
*REQUIRED % BY VOL. OF ADDITIVE (____ TR 432-A, ____ TR 432-B, ____ TR 416, ____ specified)	B		
*% MASS OF ADDITIVE (____ chart, ____ formula)	C		
DRY MASS OF SOIL (representative portion), g	D		
*MASS OF ADDITIVE TO BE ADDED, g	E	(C x D) + 100	
*TOTAL DRY MASS OF SOIL AND ADDITIVE, g	F	D + E	

* FOR USE WITH DOTD TR 418, METHOD B ONLY.

CURVE POINT NO.	***		1	2	3	4	5	6
MOISTURE CUP NO.	***							
WATER ADDED, mL	G	See Calculations						
MASS MOLD, BASE (if appl.) & WET SOIL, g	H							
MASS MOLD & BASE (if applicable), g	I							
MASS WET COMPACTED SOIL, g	J	H - I						
MASS OF CUP & WET SOIL, g	K							
MASS OF CUP & DRY SOIL, g	L							
MASS OF WATER, g	WW	K - L						
MASS OF CUP & DRY SOIL, g	L							
MASS OF CUP, g	M							
MASS OF DRY SOIL, g	DW	L - M						
WET DENSITY, kg/m ³	WWD	$\frac{J}{0.944}$						
MOISTURE CONTENT, %	MC	(WW/DW) x 100						
DRY DENSITY, kg/m ³	DWD	$\frac{WWD}{100 + MC} \times 100$						

REMARKS: _____

